

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-205411

(43)Date of publication of application : 25.07.2000

(51)Int.Cl.

F16H 63/20

(21)Application number : 2000-005539

(71)Applicant : BORG WARNER AUTOMOT  
INC

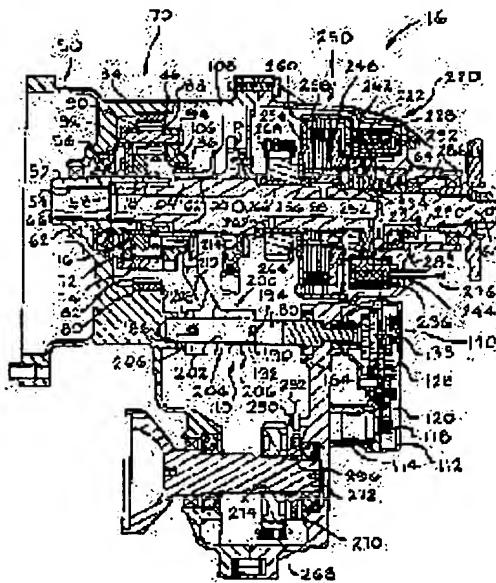
(22)Date of filing : 14.01.2000

(72)Inventor : SHOWALTER DAN J  
KARL RANDALL VOGT  
SEWELL JOHN S  
PAUL G KOWALESKI  
BARR RODNEY E  
MICHAEL W MILLER  
THOMAS P KNOX  
RADER RICHARD K  
SCOTT WODD

(30)Priority

Priority number : 99 234228 Priority date : 20.01.1999 Priority country : US

## (54) SHIFT CONTROL ASSEMBLY FOR TRANSFER CASE



(57)Abstract:

PROBLEM TO BE SOLVED: To simplify the structure of a power transmission device by a shift control assembly capable of sensing the shift position at a place close to a drive mechanism.

SOLUTION: The shift control assembly is provided with an electric motor 114, and gear trains 120, 128, 138 having an output part 116 which is connected to a shift rail 180 and which rotates the shift rail 180 in the bi-direction. A shift fork assembly 200 receives the shift rail 180 rotatably, and is arranged on the shift rail 180 between cam followers 194. The shift fork assembly 200 is provided with a body having a pair of helical surfaces distant away from each other, with which the cam followers 194 are to be engaged, and a fork for engaging a shift clutch collar. A circular plate is arranged rotatably together with the shift rail 180, and has an arrangement of holes 158. Plural sensor 160 are adjacent to a circular plate 142 and is arranged in relation in which they can

sens the circular plate.

---

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office